

t13_binarith
(TMM3nbZo9TLC2j9QDiSz7YL2hou3ZjaPzXN)

October 27, 2020

Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_margrel1 : \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (k10_xboolean k8_margrel1 X0 = k3_xboolean X0) \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboolean X0) \Rightarrow & (((X0 = k7_margrel1) \Rightarrow (k3_xboolean \\ X0 = k8_margrel1)) \wedge & ((k3_xboolean X0 = k8_margrel1) \Rightarrow (X0 = k7_margrel1)) \wedge \\ & (((X0 = k8_margrel1) \Rightarrow (k3_xboolean X0 = k7_margrel1)) \wedge \\ & ((k3_xboolean X0 = k7_margrel1) \Rightarrow (X0 = k8_margrel1)))) \end{aligned} \tag{2}$$

Assume the following.

$$k8_margrel1 = k2_xboolean \tag{3}$$

Assume the following.

$$k7_margrel1 = k1_xboolean \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k2_binarith X0 X1 = k10_xboolean X0 X1) \tag{5}$$

Assume the following.

$$v1_xboolean k1_xboolean \tag{6}$$

Assume the following.

$$m1_subset_1 k8_margrel1 k6_margrel1 \tag{7}$$

Assume the following.

$$m1_subset_1 \ k7_margrel1 \ k6_margrel1 \tag{8}$$

Assume the following.

$$k2_xboolean = np_1 \tag{9}$$

Theorem 1 $k2_binarith \ k8_margrel1 \ k7_margrel1 = k8_margrel1$.